ABSTRACT OF THE DISCLOSURE

An apparatus and method for the detection of objects in the work area such as surgical sites, including a detection tag affixed to objects such as used during surgery. The apparatus and method feature an interrogation and detection device with a transmitter for emitting pulsed wideband signals each including a signal prompting the tag element to provide a return signal, and a receiver for reception and analysis of the return signal from the tag element. Multiple pulse signals (of constant or varied height) emitted from the transmitter causes the return signals to build up in intensity at a detectable frequency above the ambient noise levels to facilitate detection of the tag element and object attached thereto. The device features an antenna portion containing a single or a plural ring-shaped antenna. Also, the pulsed wideband interrogation signal may be pulsed-width modulated or voltage-modulated, as two examples thereof.